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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/781,226	02/13/2001	Akifumi Kamijima	033211-004	7986

21839 7590 02/18/2004

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EXAMINER
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ANDERSON, MATTHEW A

ART UNIT	PAPER NUMBER
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1765

DATE MAILED: 02/18/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/781,226

Applicant(s)

KAMIJIMA, AKIFUMI

Examiner

Matthew A. Anderson

Art Unit

1765

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2/19/2003. 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-3, 5-6, 8-9, 11-12, 14-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Reinberg et al. (US 6,087,270).

Reinberg et al. discloses a method of patterning substrates including electrically conductive etch mask films of preferably a polymer composition (abstract and col. 3 lines 45+) is formed over a substrate. On the conductive film is formed a resist layer (e.g. a photoresist) which is patterned. The conductive etch mask layer is then etched through the resist using a dry etching method. The substrate is in turn etched through

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the opening formed in the conductive etch mask layer. The conductive film is last removed. This removal of the conductive film inherently requires that film to be strippable. (see Figs. 3-7). Polymer making up the electrically conductive layer is described as inherently conducting organic polymers (col. 3 liners 50-55). The conductive layer is described as eliminating unwanted charge-up during the etching. (col. 4 lines 35-45). Fig. 4 discloses an intermediate masking layer over the conductive mask layer. In other words, the conductive mask has both a lower conductive portion and an upper not conductive portion. A suggested material is the inherently metallic material silver, aluminum and /or other metals dispersed in a thermoplastic or thermoset polymer.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 10, 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reinberg et al. as applied to claims 1-3, 5-6, 8-9, 11-12, 14-15 above, and further in view of Rika (JP-07074076).

Reinberg et al. is described above.

Reinberg does not disclose Electron beam writing through the mask.

Rika discloses a manufacturing using a conductive resist film with electron beam patterning. The film is seen in the abstract to consist of a electrification prevention (i.e. a conductive) film 12 on a substrate with a resin film thereon. The resin film reacts with the electron rays which marks it as a resist film to those of ordinary skill in the art.

It would have been obvious to one of ordinary skill in the art at the time of the present invention to combine the disclosure of Rika with Reinberg et al. because Rika suggests the structure of Reinberg et al. would be useable with electron beam writing methods. Motivation would be expanded utility of the already known structure.

It would have been obvious to one of ordinary skill in the art at the time of the present invention to use electron beam writing with the claimed structure (see Reinberg et al.) because such a use is suggested for such a structure by Rika et al.

5. Claims 7, 13, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reinberg et al. as applied to claims 1-3, 5-6, 8-9, 11-12, 14-15 above.

Reinberg et al. is disclosed above.

Reinberg does not explicitly disclose the grounding of the conductive film.

It would have been obvious to one of ordinary skill in the art at the time of the present invention to ground the conductive film , however, because the purpose of the film was to prevent charge buildup at the point of etching and such grounding would provide a path for the charge to flow away from that point.

***Response to Arguments***

6. Applicant's arguments with respect to claims 1-21 filed on 3/12/2003 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew A. Anderson whose telephone number is (571) 272-1459. The examiner can normally be reached on M-Th, 7-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

MAA  
January 26, 2004

NADINE G. NORTON  
SUPERVISORY PATENT EXAMINER  
